

SECTION II—REMARKS

Applicants thank the Examiner for a thorough review, and respectfully request reconsideration of the above referenced patent application for the following reasons:

Claims 40, 48 and 56 rejected under 35 U.S.C. § 112, second paragraph

The Office Action rejected claims 40, 48 and 56 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. In particular, the Office Action objects to use of the limitation, “wherein the deployed web service to operate within the web services container on the application server,” stating that the limitation is generally unclear and is therefore rejected.

Applicants have made clarifying amendments to the claims, and respectfully submit that the amendments overcome the rejection. Accordingly, Applicants respectfully request the Examiner to withdraw the rejection to claims 40, 48 and 56.

Claims 35-38, 43-46, and 51-54 rejected under 35 U.S.C. § 103(a)

The Office Action rejected claims 35, 36, 38, 43, 44, 46, 51, 52 and 54 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent Application Publication No. 2004/0015564 to Williams (“Williams”), in view of U.S. Patent 6,604,113 to Kenyon (“Kenyon”), in view of “Web Services Conversation Language (WSCL) 1.0 by Banerji et al. (“WSCL Standard”). The Office Action further rejected claims 37, 45 and 53 under 35 U.S.C. § 103(a) as being unpatentable over Williams, in view of Kenyon, the WSCL Standard, and in further view of U.S.

Patent Application Publication No. 2003/0055878 to Fletcher et al. ("Fletcher"). Applicants respectfully disagree.

Applicants have incorporated certain features of previously presented dependent claim 37 (now canceled) into independent claim 35, which recites in pertinent part:

... receiving a Web service archive including:
a Web service implementation ...
a Web service deployment descriptor ... and
a first and second virtual interface, each to selectively expose a different subset of the Web service operations and the Web service parameters in the Web service implementation, wherein each of the first and second virtual interfaces are publishable as a separate deployed Web service;
...
deploying each of the first and second virtual interfaces as separately published Web services within the application server based on the mapping specified by the Web service deployment descriptor.

As the office action points out in its rejection of dependent claim 37, "*Williams does not teach [that a] second virtual interface is separately publishable as a second deployed web service within the application server.*" Independent claim 35, as amended, similarly recites, "deploying each of the first and second virtual interfaces as **separately published Web services** within the application server."

In its rejection of claim 37, the Office Action instead relies upon Fletcher to disclose the limitation, referring specifically to Fletcher at paragraphs 55-56 and 59, which state in pertinent part:

[0055] ... This process comprises first determining the operations that will be exposed as the portlet proxy's published functional interface (Block 600). ... programmatic operations could be used to select the methods which comprise the public interface. (For example, programmatic operations might be designed to select all public methods for exposing, or perhaps to select only the "getter" public methods.)

[0056] Once the public interface is identified, WSDL markup language syntax is programmatically created to specify this information. This comprises generating <message> and <operation> elements, similar to those illustrated in FIGS. 4A and 4B. The composer may be asked to supply information for use in this process, such as the port type name, the location of the name space information, and so forth. Or, this information or parts thereof may be programmatically generated and/or retrieved from a configuration file.

[0059] Finally, the **portlet proxy for the web service is published to a registry (Block 630), after which the portlet proxy is available for use in composing new web services** and its services are available for invocation (e.g. using a conventional UDDI find and bind). ...

Fletcher does not disclose all the claimed elements:

Fletcher does not disclose a “Web services archive including ... a first and second virtual interface ... wherein **each of the first and second virtual interfaces are publishable as a separate deployed Web service**,” as Applicants recite in amended claim 35.

The Office Action argues that Fletcher can modify Williams for “separately **deriving and publishing** the web service abstract interfaces of Williams’ invention ... as first and second web services.” However, Fletcher does not disclose a mechanism for “deriving and publishing” separate web services based on “abstract interfaces.” Instead, Fletcher discloses a mechanism for deriving and publishing “**new web services**” based on the already available functionality and services of **existing** web services, and in particular, the publicly exposed functions of those existing web services. For example, refer to Fletcher at paragraphs 42 and 61:

[0042] The present invention defines techniques **for integrating web services** and other back-end software resources into an application portal platform using a portlet model or paradigm, **thereby creating new web services**.

* * *

[0061] The web service composition tool preferably provides a portlet palette for use in this modeling operation, where **registered portlets** for a particular taxonomy or category are

presented on the palette. The **service composer then creates a new web service using the composition tool**, for example by right-clicking on a web service icon to display its **available methods and then using drag and drop operations to position selection method invocations as operations for carrying out a service**. FIG. 9, discussed below, illustrates logic with which information may be gathered for use by the web service composition tool, including locating the appropriate web services to use when constructing the palette.

Thus, Fletcher describes a mechanism for displaying and selecting various “available methods,” of other “portlet” or services, and generating a “new web service,” based on those “available methods.”

At no point does Fletcher contemplate or disclose placing such a new web service into a “Web service archive” as a second “publishable ... separate deployed Web service,” which is distinct from a first “publishable ... separate[ly] deployed Web service.” Indeed, for Fletcher’s disclosed mechanism to function properly, other “web services” and “back-end software resources” must already be available to the “service composer tool,” which gathers and displays the “available methods” for integration into a **new web service**, which is based on those “available methods.” Refer to the abstract of Fletcher and again to paragraphs 42 and 61.

Conversely, Applicants disclose a “web service implementation” within a “Web service archive,” that has “a first and second virtual interface, each to selectively expose a different subset of the ... Web service implementation.” Stated differently, “first and second virtual interfaces” claimed by Applicants are based on a single underlying “web service implementation,” whereas Fletcher discloses a mechanism to create a **single new web service** which is based on the “available methods,” of **multiple existing** web services, hence Fletcher’s use of the phrase, “dynamically **integrating** software resources ... such as web services,” in the abstract.

Thus, even in combination with Williams, Fletcher fails to disclose a “Web services archive including ... a first and second virtual interface ... wherein **each of the first and second virtual interfaces are publishable as a separate deployed Web service**,” as Applicants recite in amended claim 35. Instead, the combination of Fletcher with Williams, merely enables “new web services” to be created based upon the “available methods” gathered by a “composition tool,” from other web services.

Fletcher changes the principle of operation of Williams:

Citing *In Re Ratti*, the M.P.E.P. states,

If the proposed modification or combination of the prior art would **change the principle of operation** of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. [Refer to M.P.E.P. 2143.01 § VI, emphasis added.]

The proposed modification of Williams with Fletcher improperly changes the principle of operation of Williams.

Specifically, Williams discloses the creation and mapping of interfaces to underlying business objects, and then placing “the various components ... that make up the Web service... into an archive file ... for distribution.” Refer to the abstract of Williams and paragraphs 77 to 78 specifically.

Importantly, Williams discloses that its “‘public interfaces’ for the Web service [are] ‘mapped’ to **behind-the-firewall** ‘implementations’ of those interfaces.” Refer to Williams at paragraph 77. Williams defines “behind-the-firewall” functionality at paragraph 66, as follows:

[0066] A behind-the-firewall workflow is the **“private” processing** that the **client of a Web service will not see**. In fact, the steps of such a workflow **are often a trade secret that provide a competitive advantage** to the provider of a Web

service. Consequently, **the provider may not want to "expose" the service's workflow to its business partners.** ...

Thus, Williams discloses a mechanism for mapping "behind-the-firewall" processing, to public interfaces in a manner which allows the processing to remain "private" and un-exposed. Williams then places the mapped public interface into an archive for deployment.

The Office Action proposes using Fletcher to modify Williams to allow for "separately deriving and publishing the web service abstract interfaces of Williams' invention ... as first and second web services." Refer to the Office Action at page 7, paragraph 3.

However, such a modification impermissibly modifies the principle of operation of Williams, or the principle of operation of Fletcher. For example, if Fletcher were used to generate separate first and second web services based on the functionality of Williams, then Williams would have to be modified to expose its "private" and "trade secret" workflows, so that its previously private functionality could be deployed with the Williams archive, and then selected as "available methods," by the Fletcher "composition tool."

Such a modification is not only impermissible, but is also ill-advised, as the modification will violate the very objective of Williams, which is to keep the private processing from being seen by the "client of a Web service," or "expose[d] ... to its business partners." Thus, the proposed modification further "render[s] the prior art invention ... **unsatisfactory for its intended purpose.**" Refer to M.P.E.P. 2143.01 § V.

Kenyon and the WSCL Standard, even when combined with Williams and Fletcher, fail to cure the deficiencies discussed above. Thus, in accordance with the preceding remarks, Applicants respectfully submit that claim 35 is patentable over the prior art of record and in condition for allowance. Applicants further submit that independent claims 43 and 51, which recite similar limitations, as well as those claims which depend upon independent claims 35, 43,

and 51, are patentable over the prior art of record and in condition for allowance for at least the same reasons. Dependent claims 36-37, 44-45, and 52-53 are canceled herein without prejudice, and thus the rejection to such claims is rendered moot.

Accordingly, Applicants respectfully request the Examiner to withdraw the rejection to claims 35-38, 43-46, and 51-54.

Claims 39-42, 47-50 and 55-57 rejected under 35 U.S.C. § 103(a)

The Office Action rejected claims 39-42, 47-50 and 55-57 under 35 U.S.C. § 103(a) as being unpatentable over Williams, Kenyon, the WSCL Standard, and U.S. Patent 7,159,224 to Sharma et al. (“Sharma”).

Sharma, whether considered alone or in combination with Williams, Kenyon, and the WSCL Standard, fails to cure the deficiencies of Williams and Fletcher as discussed above with regard to independent claim 35. In particular, the combination of Sharma, Williams, Kenyon, and the WSCL Standard, fails to disclose a “Web services archive including ... a first and second virtual interface ... wherein **each of the first and second virtual interfaces are publishable as a separate deployed Web service.**” as Applicants recite in amended claim 35.

Thus, Applicants respectfully submit that dependent claims 39-42, 47-50 and 55-57, are patentable over the references and in condition for allowance for at least the same reasons as discussed above with regarding to the rejection of claim 35 under 35 U.S.C. § 103.

Accordingly, Applicants respectfully request that the Examiner withdraw the rejection to claims 39-42, 47-50 and 55-57.

CONCLUSION

Given the above amendments and accompanying remarks, all claims pending in the application are in condition for allowance. If the undersigned attorney has overlooked subject matter in any of the cited references that is relevant to allowance of the claims, the Examiner is requested to specifically point out where such subject matter may be found. Further, if there are any informalities or questions that can be addressed via telephone, the Examiner is encouraged to contact the undersigned attorney at (503) 439-8778.

Charge Deposit Account

Please charge our Deposit Account No. 02-2666 for any additional fee(s) that may be due in this matter, and please credit the same deposit account for any overpayment.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

/Gregory D. Caldwell/

Gregory D. Caldwell
Registration No. 39,926
Attorney for Applicants

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Blakely, Sokoloff, Taylor & Zafman LLP
1279 Oakmead Parkway
Sunnyvale, CA 94085-4040
Telephone: (503) 439-8778
Facsimile: (503) 439-6073